

Lower Duwamish Waterway Source Control Update (2010-2011 activities)

Seattle Public Utilities
May 3, 2012

SPU source control website:
http://www.seattle.gov/util/Services/Drainage_&_Sewer/PollutionControl/index.htm

Today's Presentation

- Business Inspections
- Source tracing/characterization
- Line cleaning

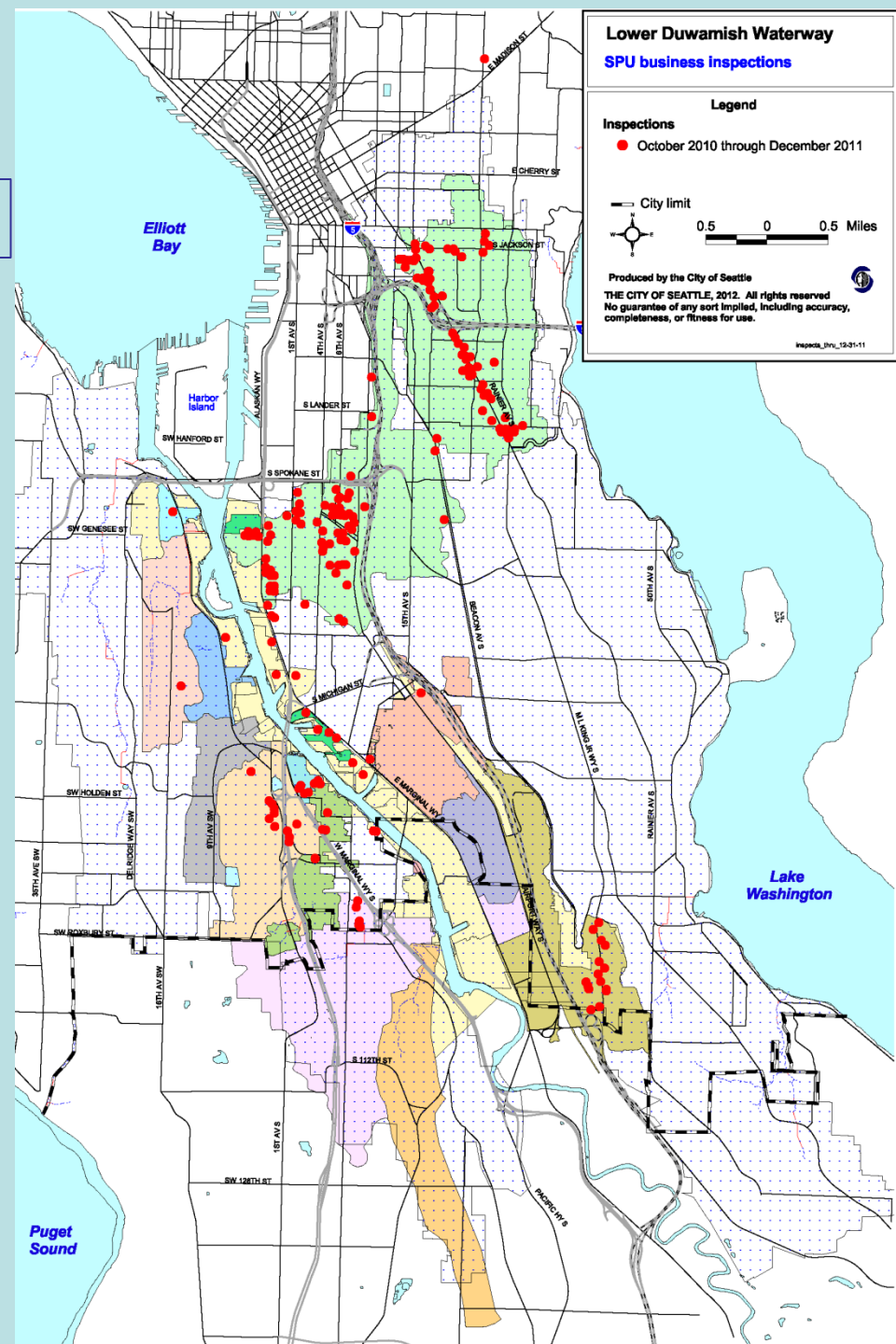


Business Inspections

Completed full sweep of LDW in 2010

October 2010 – December 2011:

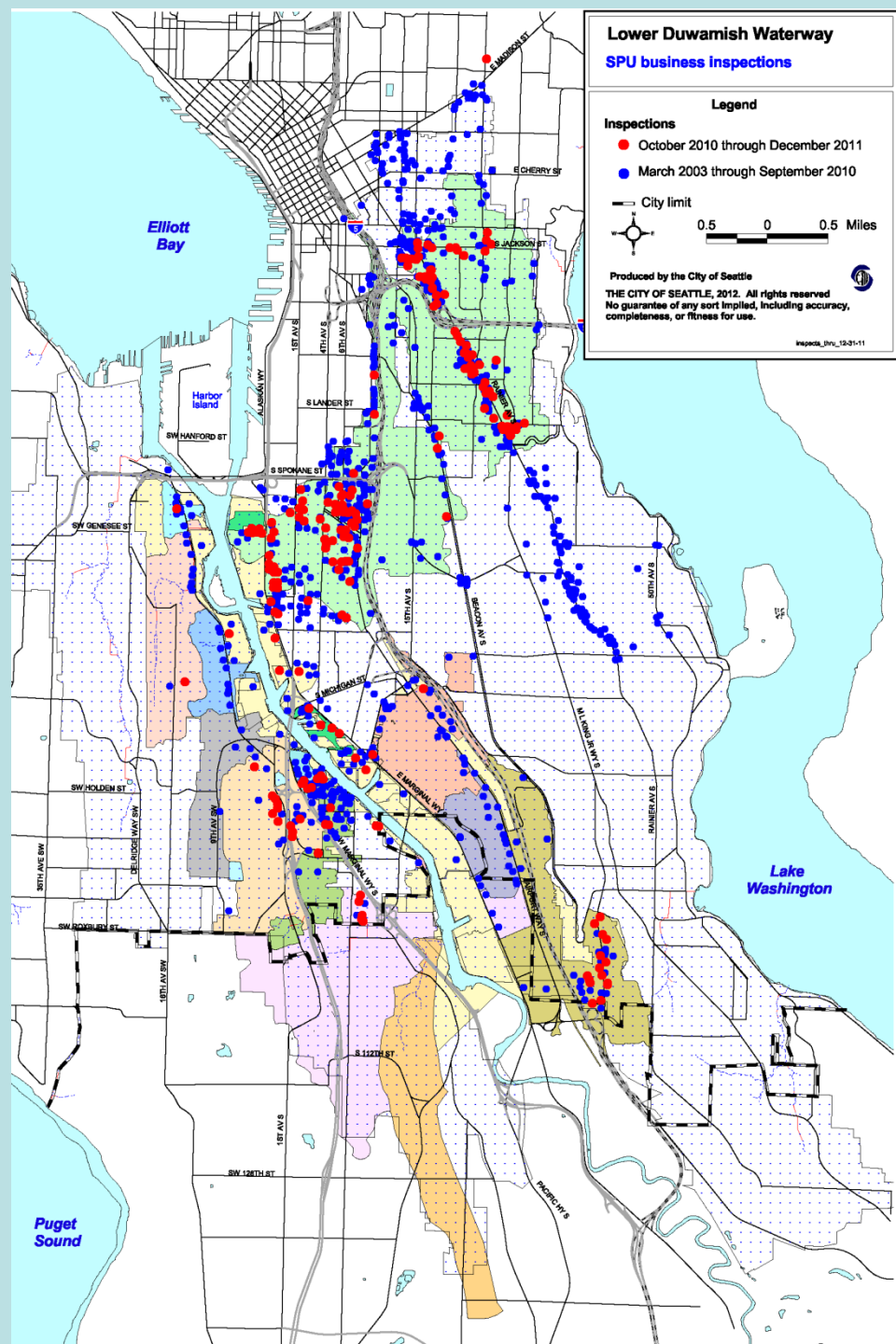
- 453 Inspections at 124 businesses
- 700 Corrective actions
- 15 Notices of violation



Business Inspections

March 2003– December 2011:

- 3,100 Inspections at 1,300 businesses
- 4,300 Corrective actions



Corrective Actions



BEFORE



AFTER

Corrective Actions



BEFORE



AFTER

NOVs

Type	No
Illicit connections	
Homeowner	2
Business	5
Illicit discharge	4
Failure to implement source control	4



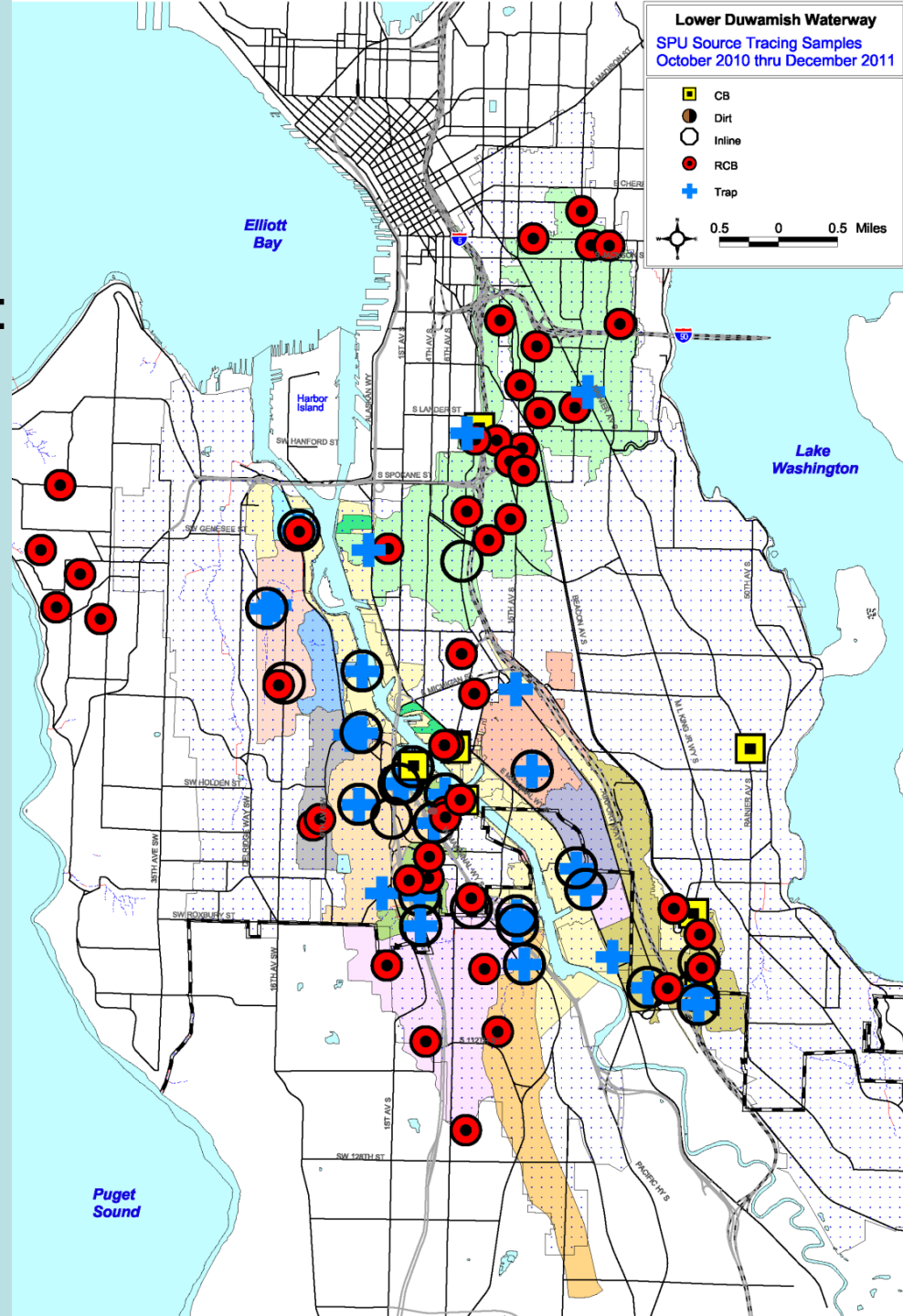
Inspection Strategy

- Prioritized businesses based on previous inspections
 - High: ~100
 - Medium: ~200
 - Low: ~500
- Inspect highs every 2 years
- Check business licenses annually for new start ups

Source Samples

October 2010 – December 2011:

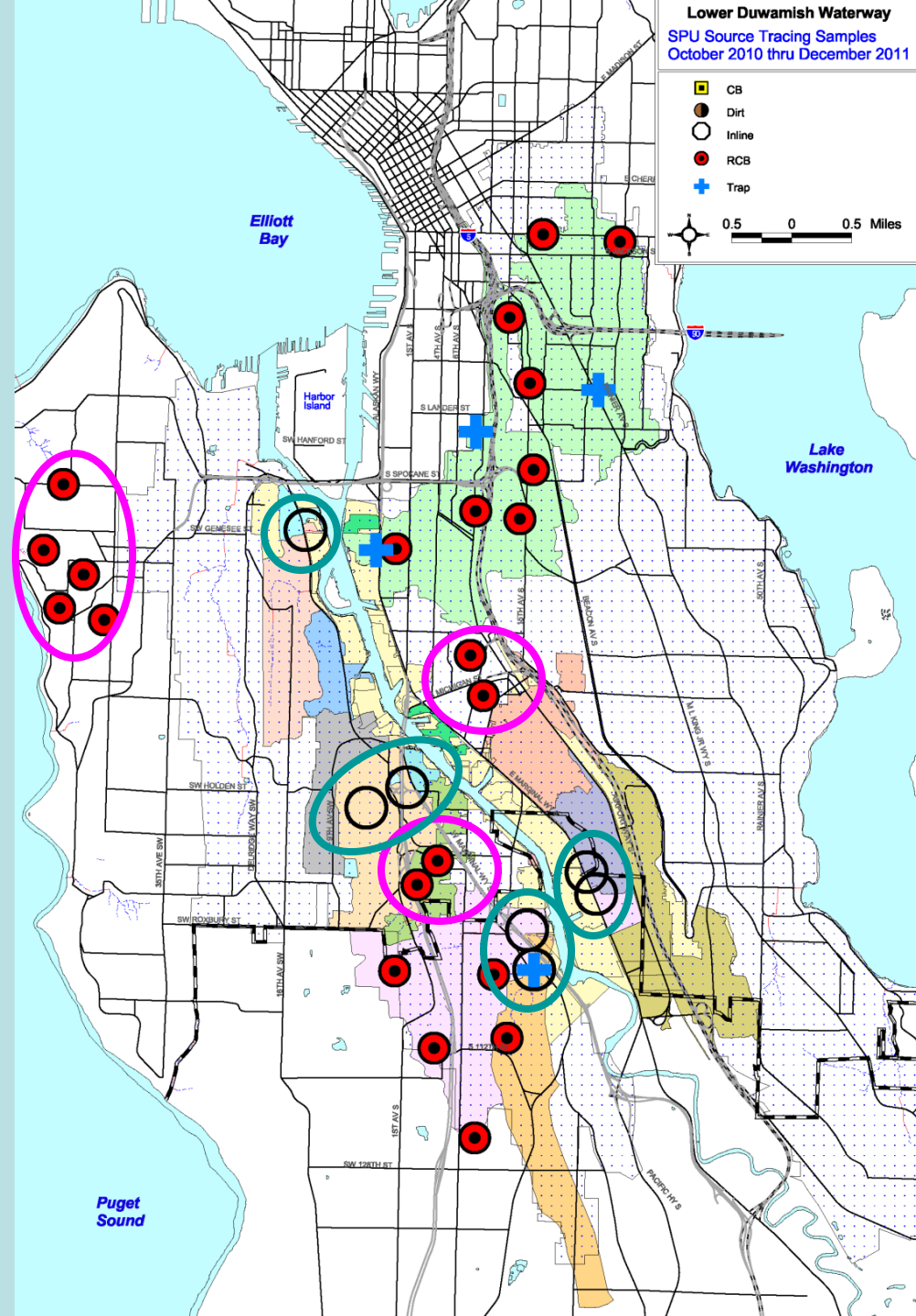
- 25 Traps
- 56 Catch basin grabs
- 26 Inline grabs



Source Samples: Dioxins/Furans

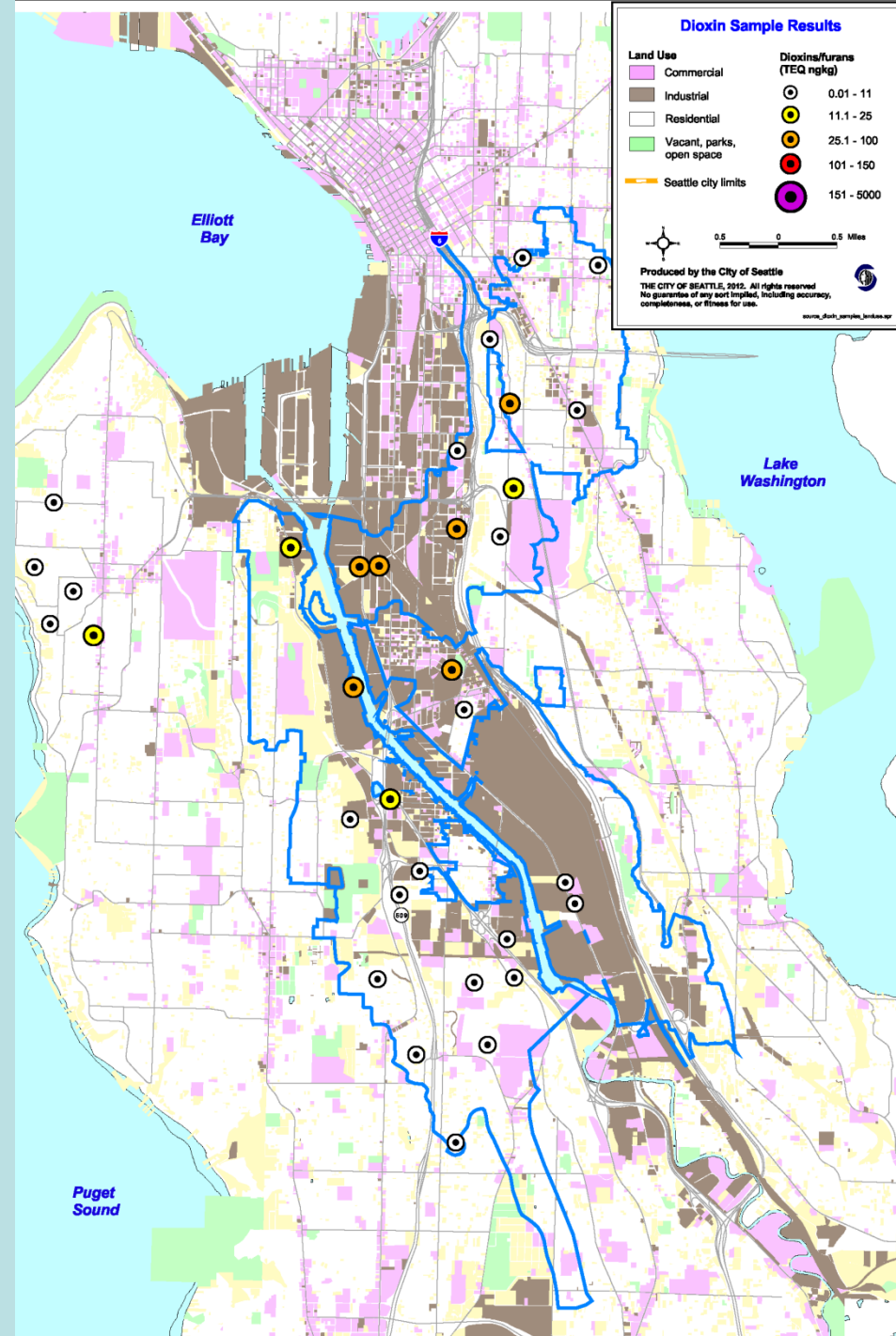
34 samples analyzed for D/F

- Inlines + traps from systems not previously sampled
 - SW Idaho St SD, 1st Ave S SD, KCIA SD #1 and #2, Hamm Creek, S 96th St SD
- Residential areas (ROW CB)
 - Ecology urban soil areas
 - Diagonal Ave S SD
 - 1st Ave S SD
 - S 96th St SD
 - Hamm Creek
- Upstream/downstream in Diagonal Ave S SD basin (traps)



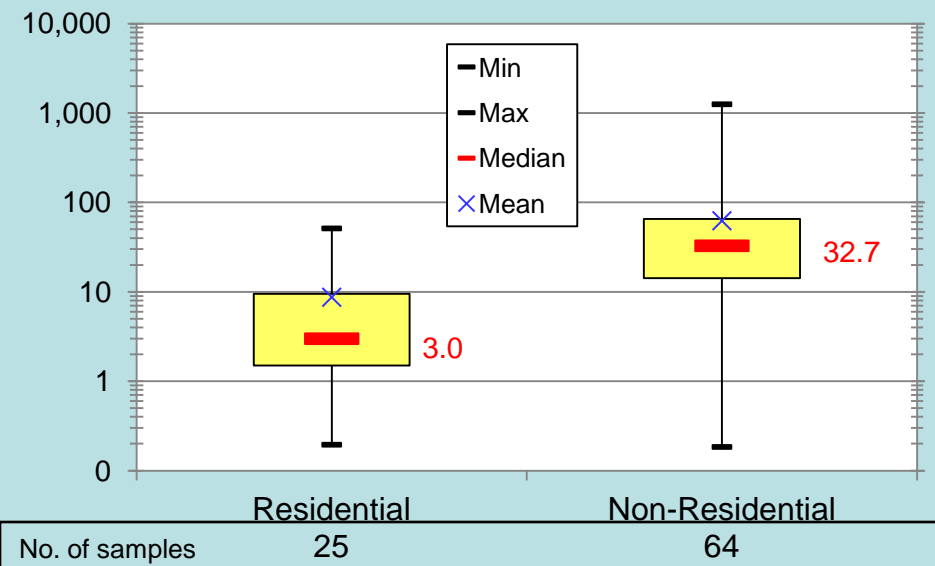
Source Samples: Dioxin Results: SPU

- TEQs appear to be lower in residential areas.



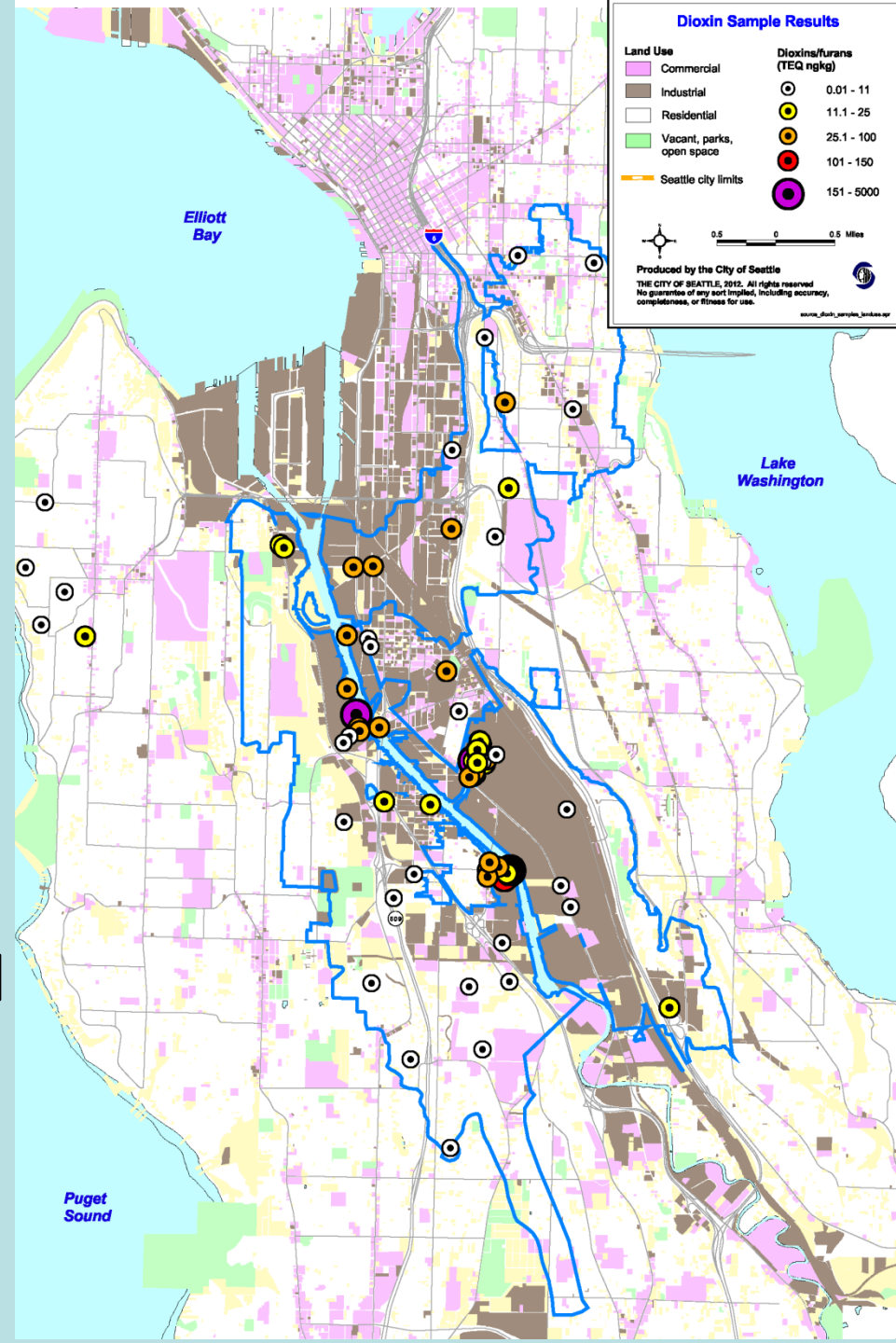
Source Samples: Compiled Dioxin Data

- TEQs generally lower in residential areas



Land use assignments

- RCBs based on adjacent parcel(s)
- Inline/Traps = mixed use or industrial



Source Samples: Source Tracing

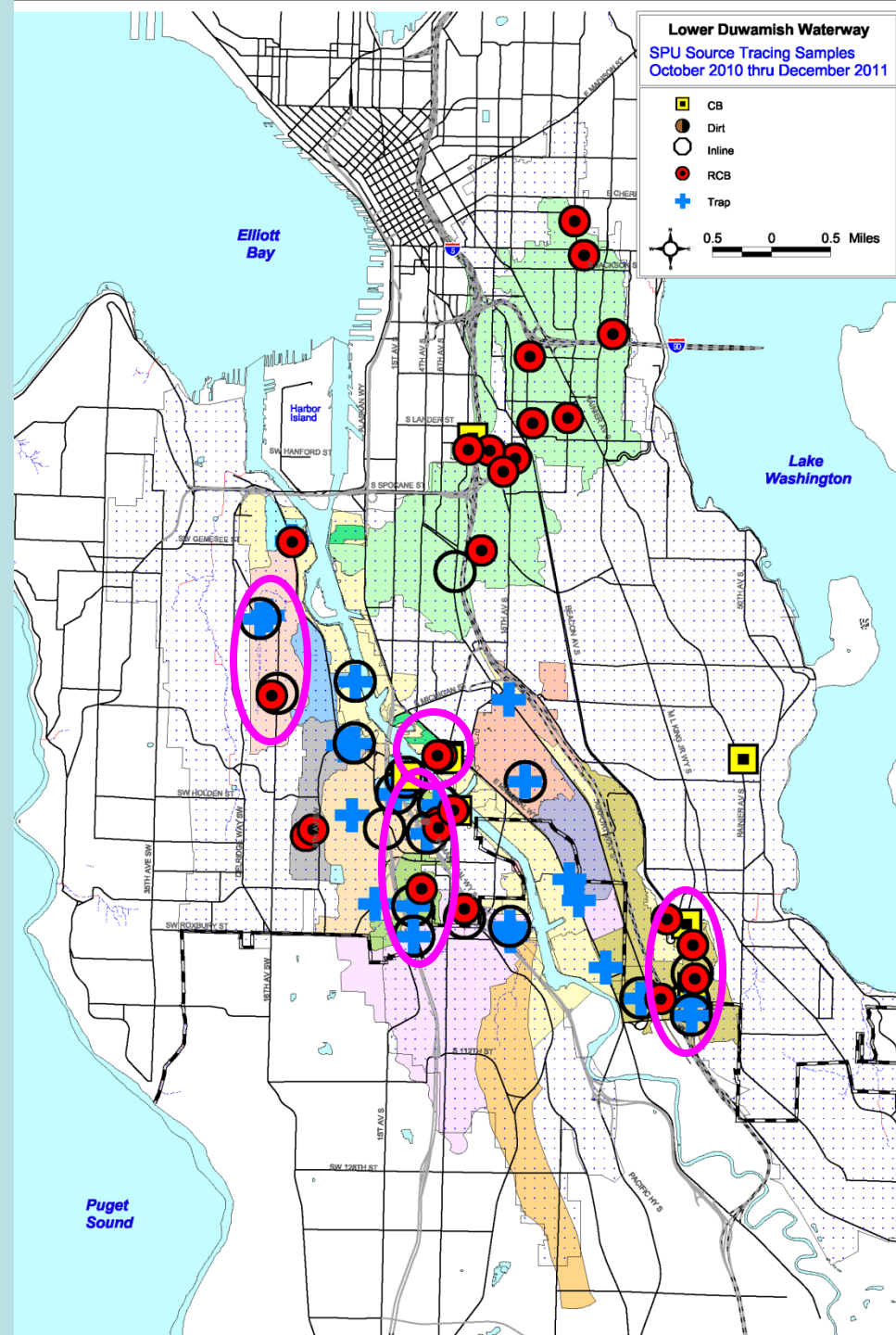
Tracing

- S Norfolk SD (HPAH)
- 7th Ave S SD (PCBs)
- S Idaho St SD (HPAH)

Check lines post cleaning

- Diagonal (no sediment)
- S Myrtle St SD (metals, PCBs)
- Misc private CBs

Characterize residential areas

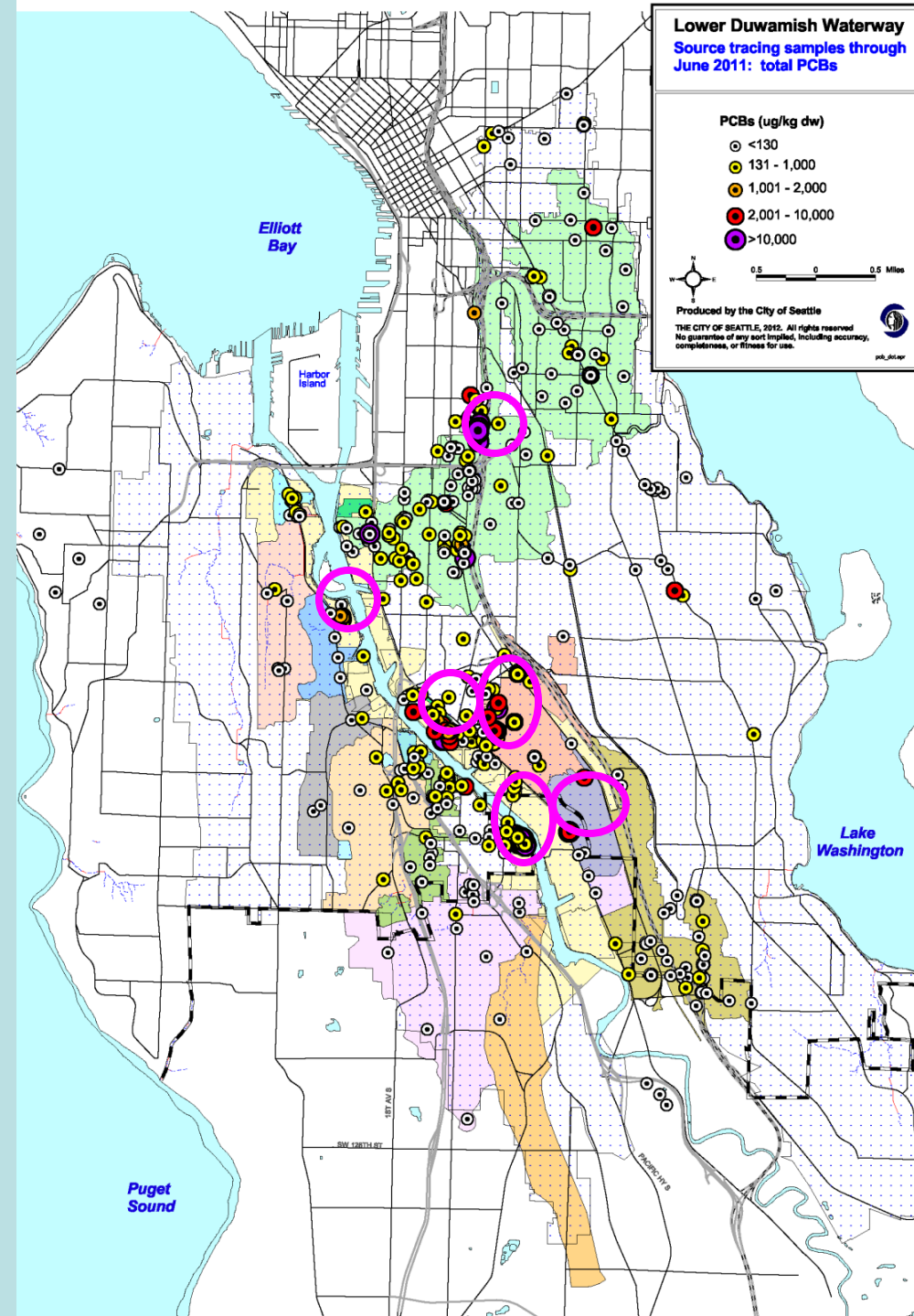


Source Tracing: PCBs

Samples through June 2011

Hotspots

- T117
- GTSP/NBF
- Rainier Commons
- KC-Jorgensen SD
- Others

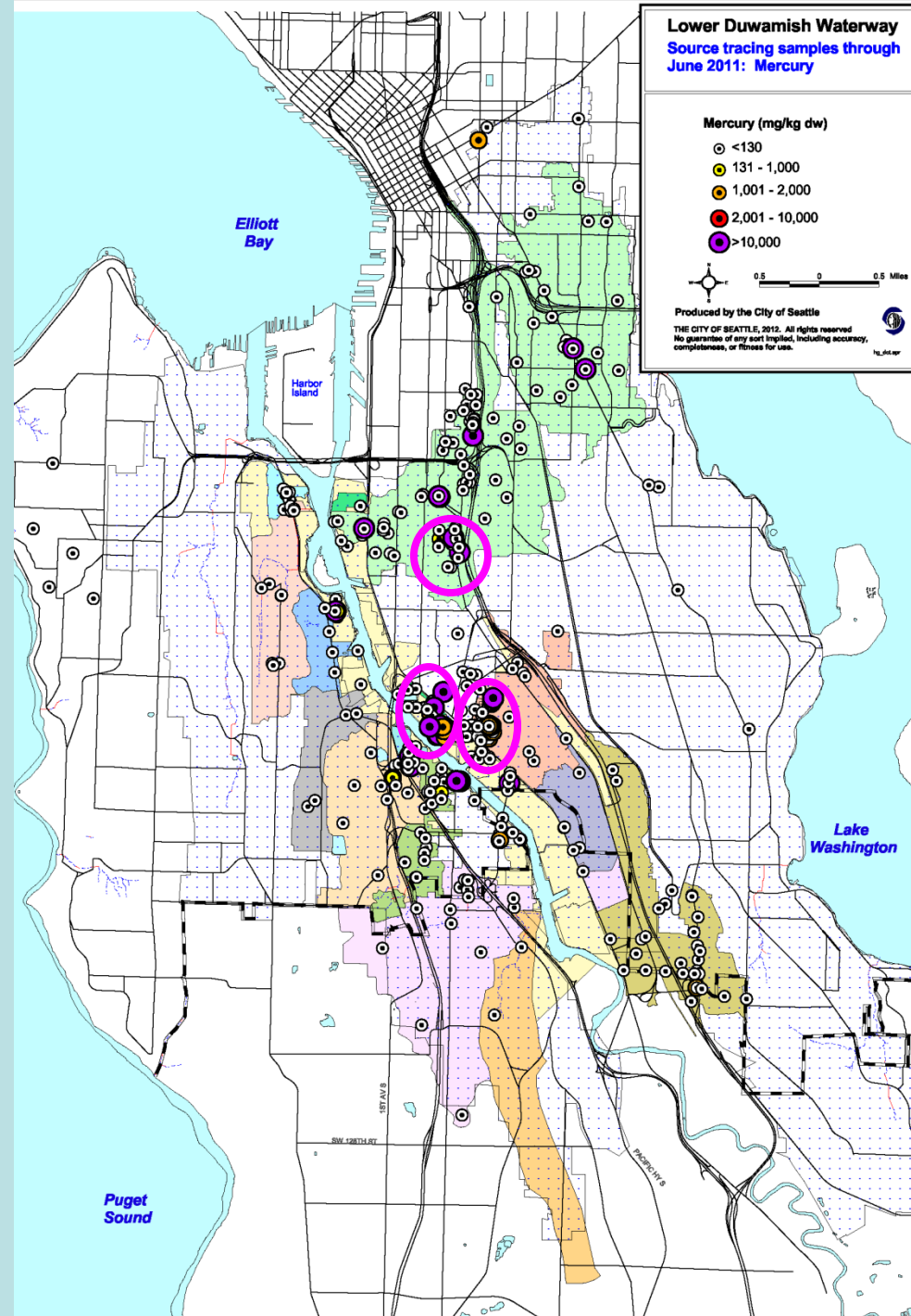


Source Tracing: Mercury

Samples through June 2011

Hotspots

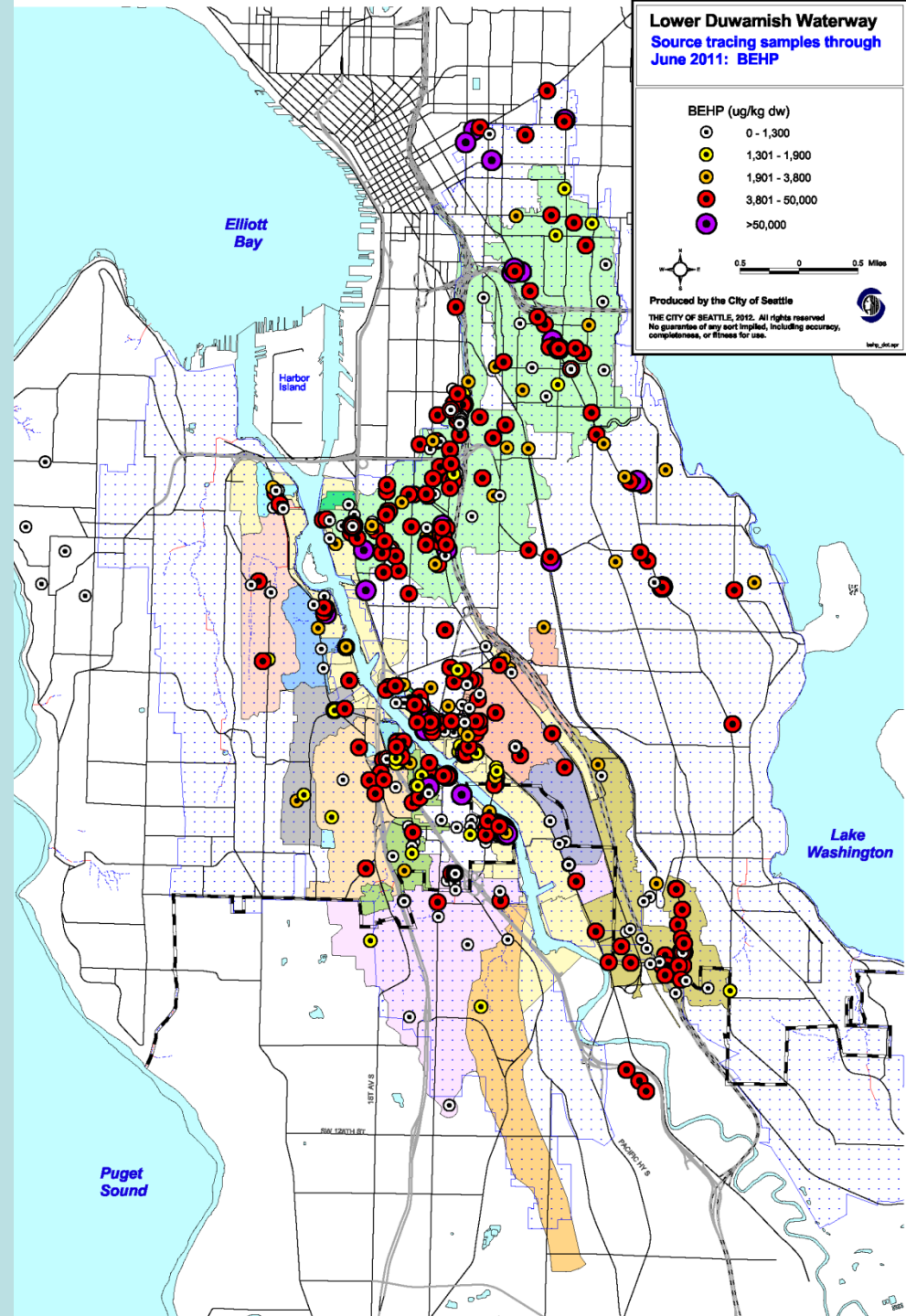
- Old flume (replaced)
- Diagonal/Airport Wy S SD (cleaned)
- S Brighton/S Myrtle SDs (cleaned)
- Miscellaneous onsite CBs
- Sporadic hits at trap locations



Source Tracing: BEHP

Samples through June 2011

- Most samples above benchmarks



Source Tracing Plans 2012-2013

- Continued tracing/focused investigations in problem areas
- Follow-up sampling where lines cleaned (RCB, inline) and source controls implemented (onsite CBs)
- Retrieve sediment traps
- Expanding to areas not yet investigated
- EQUIS dbase live

Line Cleaning

1. S Myrtle St SD, S Brighton SD, S Garden ST SD, S River St

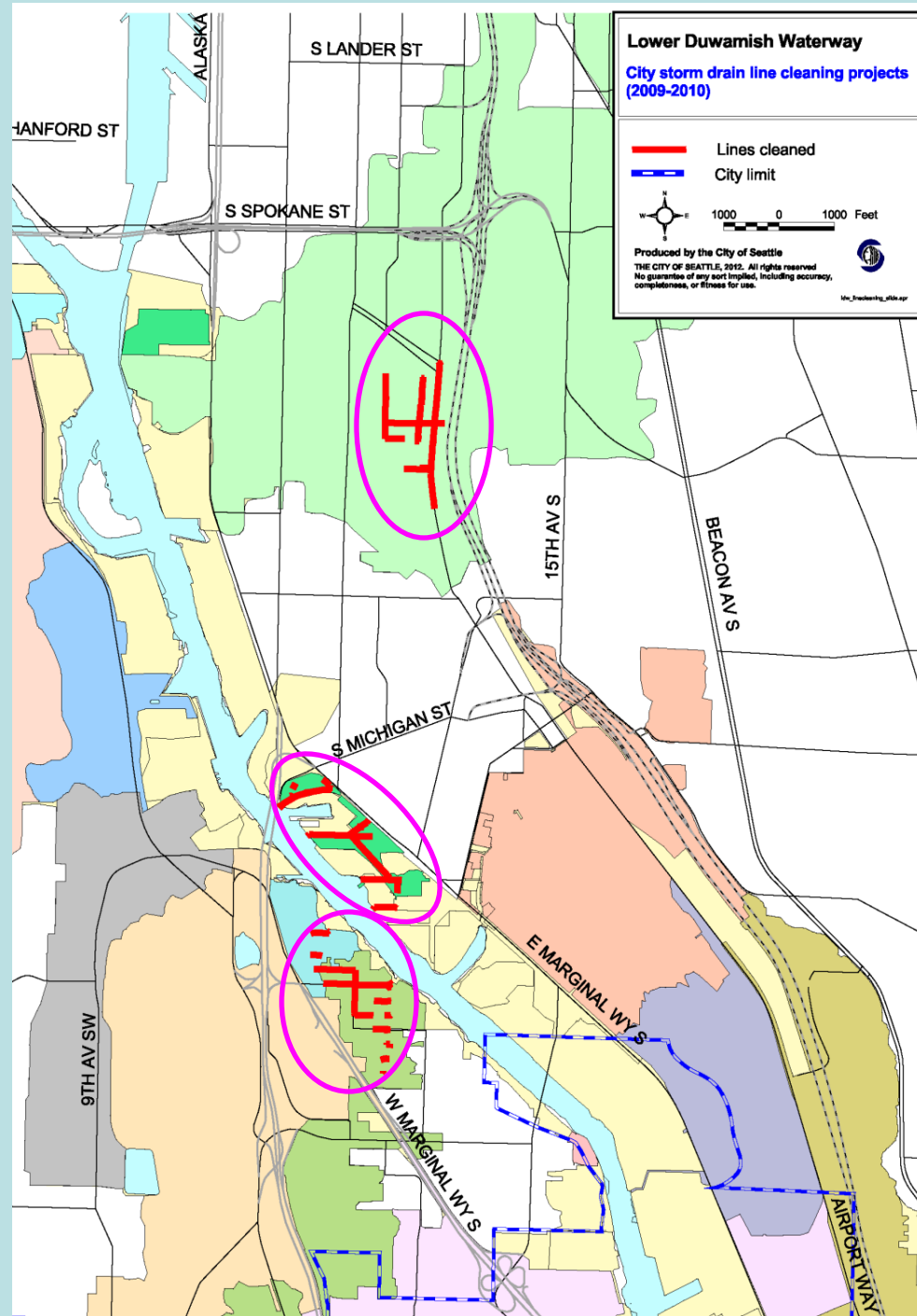
- PCBs, Hg, As
- 8,900 feet
- 97 TN removed

2. Diagonal/Airport Wy S

- Hg
- 8,300 feet
- 89 TN removed

3. 2nd /7th Ave S

- PCBs, Hg
- 4,400 feet
- 47 TN removed



Line Cleaning Operations



Norfolk/MLK stormwater pond

- 5 acre-foot wet pond/constructed wetland
- Treats runoff from 224 Ac
- Constructed 2011

